Thunderbird Press
Guidelines for Electronic Files

Dec-06

The following is a list of the most common problems encountered when a file is submitted for print. Any one of these will cause a delay in the processing of your job and can add unnecessary costs to your project.

Do any of these apply to your files:

1. Fonts Missing or Not Supplied
2. Graphics Missing or Not Supplied
3. Spot Colours - Too Many or Incorrectly Specified
4. RGB Scans and Images Used and Supplied
5. Low Resolution Images Supplied
6. Improper Bleed and Copy Margins
7. Laser Proof Not Supplied or Not Current
8. Problems in Colour and Proofing Expectations
9. Using Non-Professional Design Application Programs

The following descriptions, explanations, comments and forms are meant to be utilized as a reference guide for file preparation and submission. If you are unsure or require any assistance please contact your Account Manager or our Customer Service Team to arrange for one of our pre-press specialists to help you out.

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Thunderbird Press Ltd

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Guidelines for Electronic Files

1. Fonts Missing or Not Supplied

If you use a particular type style you must supply the **screen AND printer** font files needed to output that type style. Without the correct fonts available, our output device will substitute Courier, which will not look as desired. **DO NOT** stylize fonts. Some programs allow you to apply style (italic, bold, bold-italics) to a plain font to approximate the real font variable. Example - if you need Helvetica Bold use that font, using Helvetica Book and applying the Bold option will result in the Helvetica Book appearing in your printed piece once we have RIPped* it.

If we try to help by substituting a font, it can cause text to reflow. It is also possible that two fonts of the same name were designed by different companies, and are not identical. Any differences can cause type to reflow, lines to get cut off, hyphenation and line endings to change.

If you supply a job without its required fonts, your job may be delayed until you can supply us with a copy of the fonts. Not supplying your **EXACT** fonts used, then to expect correct results, will significantly impede the quality, budget, and schedule of your job.

There are over 20,000 different fonts out there today. They are easy to install and use. But, it is harder to locate them all and gather them for the printer. The most common mistake or problem is to forget about the fonts used in your eps graphic files. The only full and complete way to preflight, repair, and collect a job for the printer is using **MarkzWare's FlightCheck Designer.**

Fonts can be converted to outlines (vector file) when saved, this will eliminate the need to supply fonts. It will mean that any changes or corrections will have to be performed by the person that originally created the files.

2. Graphics Missing or Not Supplied

A similar but more serious problem than missing fonts occurs when images and graphics files are supplied without the layout and font files. Although the missing graphics remain visible in page layouts, they are actually linked components (which are not part of the page layout). Frequently Quark, InDesign, and Pagemaker files are received without the linked graphic files; the job is delayed while we wait for these graphic files to be sent. Missing graphics bring production to a halt since there's not even an option of substitution.

Please do not ask us to find and pick up graphics or images from another job or a previous job. It is your responsibility to submit each job complete.

Using Quark's "Collect for Output" and Indesign's "Package" utilities will gather all necessary linked graphics. However the only full and complete way to preflight, repair, and collect a job for printing is by using **FlightCheck.**

* RIPped is the process used to produce individual printing plates. CYMK print creates 4 plates.

3. Spot Colours - Too Many or Incorrectly Specified

When separations are printed, each of these names produces a different plate. Please use same names for the same colours throughout your files. PMS 300 is different from PMS 300CV, graphic application programs will treat these differently so be consistent when naming. Colours used in your files **MUST** be accurate to the colours in your print quote. For example: A job that is quoted to print 5 colours, CMYK + a PMS "Spot" colour, **MUST** be prepared to print out to only 5 colours. Most files contain extra colours or colours that are not separating correctly. If your job is not prepared to separate correctly, it will cause a delay to repair the files and make them separate correctly. Delete any unused colours from your files. Prior to submitting your file you are wise to print the file colour separated (colour broken laser proofs) to ensure you have not missed converting a colour or that you do not have unwanted colours included in your work.

All colors that are not supposed to be PMS or "Spot" colours as defined in the quotation must be deleted or converted to CMYK process colours. From within layout and illustration programs, special colours can be named and used to colour type, fill shapes, create borders, etc. You can optionally separate the colour into one or more of the four-colour process (CMYK) plates, "Convert to Process", or to output it as a separate plate for printing with a PMS or "spot-colour" ink. Every time a special colour is created or used without specifying it as a process separation, the colour will output as an additional plate. That extra colour plate would then have to be printed on an additional press unit or omitted from the job.

Some "spot-colours" or PMS colours cannot be accurately reproduced or proofed in CMYK. Especially, metallic colours, some oranges, greens, and very rich blues cannot be reproduced well by CMYK. If your job uses these spot colors, it will be necessary to contact you and determine if you wish to change your design, or run our closest, although not accurate, CMYK match. We recommend using only the Pantone Process colour system for colour selection. Always use either a CMYK build of colour, or a colour selected from the PMS Library in the layout or illustration application.

4. RGB Scans and Images Used

All scanners use RGB (red, blue and green.) when saving a colour scan. It is necessary to convert all colour scans to CMYK (cyan, magenta, yellow and black) before the files are separated. CMYK is the colour gamut used in commercial printing. All black & white or colourized one colour scans should be saved as Grayscale. No other colour modes should be used.

Because RGB is a broader colour spectrum the original scan will look different once converted to CMYK. Usually scans get darker when converted from RGB to CMYK. Conversion should be done carefully using the best possible settings so

this colour shift can be observed. Leaving your RGB Image to be converted to CYMK by Thunderbird can result in unacceptable colour shifts.

Colour corrections should always be done with CMYK scans and all colour scans should be converted to CMYK prior to submission to Thunderbird. Supplying your images in RGB mode will delay your job and add additional costs.

5. Low Resolution Images Supplied

Most of the problematic scans we receive have been scanned at too low of a resolution for a quality process. Computer to plate and other quality devices normally output at 2540 dpi and 175 line screen. So it is **VERY** important that scans be prepared at the proper resolution to support the quality of the process. Always pay attention to the image size and use a preflight program to warn of low resolution files.

Colour or Grayscale scan resolution should never be less than 300 DPI (at final size). It is best to error on the high side, so 350 DPI (at final size) would allow a safe tolerance for scaling in the layout application.

Bitmap, or Line-Art scan resolution should never be less than 600 DPI (at final size). It is best to error on the high side, so 800 DPI (at final size) would allow a safe tolerance for scaling in the layout application.

Remember, enlarging and reducing a scan in a layout affects its output resolution, thus the term, (at final size).

Resizing a scan up will reduce the resolution. So, a scan placed at 200% has **HALF** the resolution of the original. A 300 DPI scan enlarged to 200% in Quark has a resolution of ONLY 150 DPI (at final size).

Thus, resizing a scan down will increase the resolution. A scan placed at 50% has DOUBLE the resolution of the original. A 300 DPI scan reduced to 50% in Quark has a resolution of 600 DPI (at final size).

Based on the Nyquist theorem of analog-to-digital sampling, the resolution of two times line screen is optimal. If the scan is of a colour logo, has small type, or important detail in the image, the quality requirements may require a higher than normal resolution.

6. Improper Bleed & Copy Margins

Any page design objects that touch the edge of the page must be extended 1/8" beyond the edge. Without properly applied bleed, slight shifts in cutting equipment could result in paper showing at the edges where ink is intended. Extending bleed allows a certain manufacturing tolerance. Example, if a page has a background colour of black that covers the entire page, the black area should

be extended to hang over and beyond the trim marks instead of stopping at the edge.

Most bleed problems are easy to fix. The difficult repairs are when the object that needs to bleed off the edge of the page is a graphic such as a Photoshop image. If the image file doesn't contain enough image to extend another 1/8", that area may need to be cloned in. So any image that requires bleed should be designed with this in mind. Adding 1/8" to a complicated Photoshop file can be difficult and expensive once it reaches the printer. Although it is easy to check and set your bleeds while you are creating layouts, it is time consuming to alter your design once it gets to us.

Any pages where you have type that is expected to be readable needs to be restricted away from the trim marks 1/8" Restricting the use of live copy and text away from the trim allows a certain manufacturing tolerance. Example, if a page has a readable line of text at bottom of page, the line of text should be restricted to 1/8" inside the trim marks instead of being placed right on the cut line. If the cutter moves around a little in production, you never want that live copy to get cut off. Thunderbird recommends that in the layout of a job, a healthy live copy margin should be maintained.

7. Laser Proof Not Supplied or Not Current

When you send laser proof with your files it does two **VERY** important things.

i. Provides a Quality Control Checkpoint - A black & white laser proof verifies the document to be output, demonstrates expectations, and allows your job to be planned based on that laser. We can compare your laser proof to our proof, checking to verify the correct positioning of elements and to rule out any text reflow problems. Without a proof we cannot determine if what we are about to print is correct or not. When no proof is provided, we have no guide as to how you want your lines to break and we don't know if a type reflow is the result of a last minute edit, or a difference between our default settings and yours.

ii. Communicates - A client who fails to provide a laser proof along with electronic files is not communicating clearly what is needed. Again, much like a bindery dummy, it serves a very important requirement communication. Without it, there is not the same clear communication that is possible with a laser hard copy proof. **Your proof provides information crucial to the correct production of your job.**

When possible, have such B&W laser proofs marked up with the names of colours and files. When we receive only a disk, we have no idea what's on it, we cannot even review it or plan the job until we make our own laser proofs. Files submitted via the Internet or over a phone line can be accompanied by a faxed laser copy. It's better to output the copy on a laser printer and then fax it using a fax machine, rather than faxing directly from a computer. If faxing from a computer, the customer can't see what the lasers look like. All jobs are required

to come in with a marked-up B&W laser print of the documents. If no laser proof is submitted, it may delay the printing of your job.

It is extremely important that your proofs should be generated from the **exact same file** that you are sending us. A last minute edit to the file means you must make a new proof. Please mark the proof "**Proof is Current**" to let us know that any discrepancy between our output and your proof is in fact, an error. If for any reason you cannot supply a current laser proof, please note any changes and/or corrections on the out-of-date proof. Also, if your proof is not printed at 100%, please mark the proof "**Not at 100%".**

8. Problems In Colour Proofing Expectations

Low-end colour proofers and monitors do not show accurate colour. The best way to judge colour is by a calibrated accurate proof. Always use Pantone swatches and 4 colour swatches to develop your colour expectations. Expect the more accurate colour proof from Thunderbird to look different from your colour proofs.

Please set expectations correctly. When showing colour lasers to your customers, the designer should always explain the variance in colours between the different equipment. This will prevent surprises when the contract proof or printed piece is delivered.

It is also important to remember that some spot-colours, or PMS colours can't be accurately reproduced in CMYK. Common examples: metallic colors, a few oranges, a few greens, and a few VERY rich blues, can't be accurately reproduced in CMYK. If your files use these spot colors, it may be necessary to contact you to see if you want to change your design, or run to the closest possible CMYK match. We recommend using the Pantone Process colour systems for color selection, and relying on PMS to process swatches to set your expectations correctly.

9. Using Non-Professional Grade Applications

Sometimes jobs are done in consumer level software package. Many consumer level desktop publishing programs and word processors do not provide postscript CMYK separations and other professional controls required to provide a quality job. These applications lack support for such a high quality process. This would include Microsoft Publisher, Word, Excel, Powerpoint, WordPerfect, Lotus Freelance, Lotus AmiPro, Lotus 123.

We are usually able to work from these programs for black and white and single colour output only. If you are using such a program, limit your expectations to black and white. If you need colour, it can be forced to CMYK through a conversion we can do to a PDF, but that handling in itself can add cost and time that is not allowed for in your quote.

If you have these type of files, please see if you can create a PDF file of your pages, and submit that to us. The PDF is a more common and professional file type that we can work with. Be sure to use high quality, high resolution, print settings in Acrobat Distiller when making your PDF files. When processing files into PDF, you must protect the resolution through using correct Acrobat Distiller settings.

Professional programs are considered:

Illustrator® - a drawing (vector) program, ideal for logos, packaging, posters and single page layouts.

Photoshop® – is a pixel based (raster) program that lets you size, colour-correct and manipulate scanned images such as photographs and flat art. Also good for single pages.

QuarkXPress® or InDesign® – used to create multi-page documents.

See below for proper settings to prepare PDF's from your native files.

Other Design Considerations

Digital Cameras: Some of you may decide to take your own photos, this is not a problem as long as you remember the DPI issue noted above. Be sure that when you take and save the photos that they are at the camera's highest resolution. Again if you take a 3 X 5 photo and expect to enlarge it to say 6 x 10 the resolution will be reduced to half of the original. Since most printers use 150 to 300 lpi[a] to print, the dpi[b] of the photo at the actual size you need it should be twice these amounts, otherwise you will have a picture that is not as clear and sharp as what you took. Photos should be converted in Photoshop® to 300 dpi or higher CYMK tifs* or eps* files, do not use RGB or jpegs*, as the printer will have to convert them to CYMK which may cause the colour to shift and jpegs are a web format unsuitable for print.

Screens and Gradients: Highlite dots should be approximately 5% and shadow dots should be 93-95% on coated stock and 85-90% on uncoated. When creating a graduated screen it should never go to 0% and any reversed type out of it should not be done in a screen value less than 40%. Improperly prepared gradients result in visible banding when the job is RIPped, it is a problem that is very costly for us to repair after submission.

Ink Coverage: To prevent images from plugging in on press avoid ink coverages in excess of 300% on coated stocks and 280% on uncoated stocks. If you are using a large solid black it may be advisable to put what printers call a helper under it, this is usually done with a 40% cyan screen, in this way you achieve a richer black with a more even colour.

Font Sizes: Rule/keylines should not be less than .25pts for one colour and .6pts for multiple colours smaller than this will result in them not imaging when they are RIPped. Reverse type should be 9pt especially if it is coloured, the smaller/finer the font the more chance there is it will plug in during the printing process.

Ghosting: A faint printed image that appears on a printed sheet where it was not intended. Mechanical ghosting refers to the faint image appearing as a repeat of an image on the same side of the sheet. Usually occurs in situations where a large solid proceeds an image using the same colour(s), phenomenon of printed image appearing too light because of ink starvation. Often a design issue that can not be corrected by the printer, unlike chemical ghosting that can usually be addressed by the production methods of the printer.

Trapping: Our RIP will automatically apply the proper trapping, do not trap your files.

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[a] lpi – lines per inch – printer's quality standard, the higher the lpi the better the image quality
[b] dpi – dots per inch – number of dots that fit vertically and horizontally into a one inch measure, higher the dpi the better the quality

* eps, tif and jpeg are all file extensions denoting file types

Prior to Preparing PDF's Checklist

- ☐ 1. all screen and printers fonts are included
- ☐ 2. all scans are at high resolution (350dpi at 100% photo, 1200dpi at 100% for line art)
- ☐ 3. any RGB scans have been converted to CYMK or Grayscale
- ☐ 4. 4 colour printing – convert Pantone and RGB Images to CYMK
- ☐ 5. all unused colours have been deleted – print a colour broken laser proof to confirm this.
- ☐ 6. at least .125 (1/8") bleed has been added where necessary
- ☐ 7. spell check document
- ☐ 8. current laser proof for printer (allow them to verify they have the proper files)

Please refer to our PDF preparation guidelines.

SAVING YOUR FILE AS A PDF USING Adobe® Acrobat®.

Set your preferences in Distiller.

Several preferences need to be set in Distiller to get proper output. These are set in Adobe PDF Settings (Settings > Edit Adobe PDF Settings). We'll go through them tab by tab, from left to right. (NOTE: The following settings and images are from Distiller 7.0. Older versions of Distiller may not have all of the options you see here, but the basic principles of resolution, font embedding, etc., are similar.)

General

Compatibility — Set to Acrobat 5.0. If you don't, spot colors in your document will be remapped to CMYK.
Object-Level Compression — Unchecked.
Auto-Rotate Pages — Unchecked.
Binding — Set to Left.
Resolution — 2400 dots per inch, All Pages.
Embed Thumbnails — Unchecked.
Optimize For fast Web View — Unchecked.
Default Page Size — Set page size to 8.5” x 11”

Images

Color Bitmap Images, Grayscale Bitmap Images — Bicubic downsampling 300 for images above 450. Quality for each should be set to Maximum.
Monochrome Images — Bicubic downsizing to 1200 for images above 1800. Compression CCITT Group 4. Anti-Alias to gray should be off.

Fonts

Embed all fonts — Checked.
Subset embedded fonts when percent of characters used is less than: — Set to 100%. This setting is the percentage of characters in the typeface that can be used before Distiller will embed the entire font. Subsetting can dramatically reduce the size of font-intensive PDF files.
When embedding fails: — Set to Cancel Job.
Embedding, Always Embed: and Never Embed: — These are user-defined settings that, should be left alone. The other settings in this section will take care of the fonts in your document. Marking fonts to Never Embed could potentially cause fonts to be left out of your PDF file, which could cause problems when the file is being processed through our RIP.

SAVING YOUR FILE AS A PDF USING Adobe® Acrobat®.

Color

Settings File — set to None
Colour Management Policies – set to Leave Color Unchanged
Device-Dependent Data:
Preserve Under Colour Removal and Black Generation — Checked.
When transfer functions are found — set to Apply
Preserve Halftone Information — Unchecked.

Advanced

Options:
Allow PostScript file To override Adobe PDF Settings — checked.
Allow PostScript XObjects — Unchecked.
Convert gradients to smooth shades — Checked.
Convert smooth lines to curves — Unchecked.
Preserve Overprint Settings — Checked.
Overprinting default is nonzero overprinting — Checked.
Save Adobe PDF settings inside PDF file — Checked.
Save original JPEG images in PDF if possible — Checked.
Save Portable Job Ticket inside PDF file — Unchecked.
Use Prologue.ps and Epilogue.ps — Unchecked.
Create Job Definition Format (JDF) file — Unchecked.

Document Structuring Conventions (DSC):

Process DSC comments — Checked.
Log DSC warnings — Unchecked.
Preserve EPS Info from DSC — Checked.
Preserve OPI comments — Unchecked.
Preserve document info from DSC — Checked.
Resize page and center artwork for EPS files — Checked.

Standards

Compliance standard - None
Save As...
Save your new job options so that you can use them when needed. We suggest a name like "PDF for Tbird" or "Tbird Press Quality."

Save your PostScript file.

To save PostScript files for PDF using Acrobat Distiller and your favorite desktop publishing software, follow the instructions provided both in the documentation for your software and the online help file provided with Distiller. In addition, the following things need to be taken into account when creating PostScript files for conversion to PDF with Acrobat Distiller:

a. Save as composite PostScript. You should always save the PostScript file with Separations turned off. If the program you're using doesn't have an option to turn separations off, it likely only outputs composite PostScript.

SAVING YOUR FILE AS A PDF USING Adobe® Acrobat®.

b. Always include all fonts and images. Your PDF file will not RIP properly without them.
c. Save your pages with bleeds and registration marks. As you probably know, any photos, tinted areas, etc., that run to the edge of a page need to be extended, or bleed, at least 1/8" beyond the edge of the page. Acrobat PDF files, however, do not include bleeds, so in order for the files to be properly configured for RIPping and output, certain adjustments will need to be made.

Thunderbird Press highly recommends that when the pages are saved out of your desktop publishing program, the page size be set to 1" larger than the document size, and that crop marks be included. Registration marks should be set to offset 1/8" (9 pt.) instead of the program's default (usually 6 pt.). It will allow you to double-check whether items bleed before sending the files to us. This step could potentially save you time and money, since we cannot add bleed to pages in a PDF file.